(a) preparing an aliquot of cells containing a predetermined target population by providing a starting sample of cells derived from umbilical cord blood, and causing cells of the target population in the starting sample to divide; and

(b) administering to the subject the aliquot of cells, in an amount sufficient to cause said improvement.

37. (Amended) A method of causing an improvement in central nervous system function of a patient comprising:

obtaining an aliquot containing a predetermined target population of cells by

(a) introducing a starting sample of cord blood cells into a growth medium;

(b) causing said cord blood cells to divide; and

(c) concurrently with, intermittently during, or following step (b), contacting the cord blood cells in the growth medium with a selection element comprising a plurality of selective binding molecules with affinity for cord blood cells or a first population of non-target cells so as to select cells of the target population from other cells in the growth medium; and

administering the aliquot to the patient.

Please cancel claims 18, 26, 28, 38, and 39 without prejudice.

Please add new claims 44, 45, 46, and 47:

44. A method of causing an improvement in function of the central nervous system of a subject having impaired central nervous system function resulting from a stroke, said method comprising

(a) preparing an aliquot of cells containing a predetermined target population by providing a starting sample of cells derived from umbilical cord blood, and causing cells of the target population in the starting sample to divide; and

(b) administering to the subject the aliquot of cells, in an amount sufficient to cause said improvement, wherein said cells comprise CD34+/-, Lin-cells.

45. The method of claim 37, wherein said patient has suffered a stroke and said cells are administered directly to the site of said stroke or are administered intravenously.

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46. The method of claim 45, wherein said cells are administered directly to the site of said stroke.

47. The method of claim 44, wherein said cells are administered directly to the site of said stroke.